

22-31, 49-52, 53-59

C2 2 (Amended)
23. A method of detecting a mutated retinoblastoma ("RB") gene, the method comprising the steps of:

- (i) isolating RNA from a cell sample;
- (ii) hybridizing the RNA with an isolated full-length, wild-type RB cDNA probe; and
- (iii) detecting the presence of an abnormal RB RNA, the presence of a normal RB RNA or absence of an RB RNA, wherein the presence of an abnormal RB RNA or the absence of an RB RNA indicates a mutated RB gene.

C3 5 (Twice Amended)
26. An isolated nucleic acid molecule that is complementary to a 4.7 kb retinal mRNA, said mRNA being present in a cellular sample isolated from a human who lacks symptoms of retinoblastoma neoplastic disease, wherein said isolated nucleic acid has the restriction fragment map shown in FIG. 1.

6 (Twice Amended)
27. An isolated nucleic acid molecule that encodes a retinoblastoma protein, wherein said retinoblastoma protein has the amino acid sequence shown in FIG. 6.

C4 7 (Amended)
28. An isolated nucleic acid molecule, wherein said nucleic acid has an open-reading frame, and wherein the 5' end of said open-reading frame is shown at nucleotide position four of the nucleotide sequence shown in FIG. 5, and the 3' end of said open-reading frame is shown at nucleotide position 2784 of the nucleotide sequence shown in FIG. 5.

C5 10 (Twice Amended)
31. A method of using the nucleic acid of claim 24 to express a polypeptide encoded by said nucleic acid, said method comprising the steps of providing said nucleic acid in a cell or in an expression system, and expressing said polypeptide from said nucleic acid.

13 ^{Amended}
51 An isolated nucleic acid molecule, wherein said nucleic acid has an open-reading
C6 frame, and wherein the 5' end of said open-reading frame is shown at nucleotide position 337 of
the nucleotide sequence shown in FIG. 5, and the 3' end of said open-reading frame is shown at
nucleotide position 2784 of the nucleotide sequence shown in FIG. 5.

Please add the following new claims:

C7 *15* ⁵³ A method of using the nucleic acid of claim 25 to express a polypeptide encoded by
said nucleic acid, said method comprising the steps of providing said nucleic acid in a cell or in an
expression system, and expressing said polypeptide from said nucleic acid.

16 ⁵⁴ A method of using the nucleic acid of claim 26 to express a polypeptide encoded by
said nucleic acid, said method comprising the steps of providing said nucleic acid in a cell or in an
expression system, and expressing said polypeptide from said nucleic acid.

17 ⁵⁵ A method of using the nucleic acid of claim 27 to express a polypeptide encoded by
said nucleic acid, said method comprising the steps of providing said nucleic acid in a cell or in an
expression system, and expressing said polypeptide from said nucleic acid.

18 ⁵⁶ A method of using the nucleic acid of claim 28 to express a polypeptide encoded by
said nucleic acid, said method comprising the steps of providing said nucleic acid in a cell or in an
expression system, and expressing said polypeptide from said nucleic acid.

19 ⁵⁷ A method of using the nucleic acid of claim 29 to express a polypeptide encoded by
said nucleic acid, said method comprising the steps of providing said nucleic acid in a cell or in an
expression system, and expressing said polypeptide from said nucleic acid.

20 ⁵⁸ A method of using the nucleic acid of claim 30 to express a polypeptide encoded by

said nucleic acid, said method comprising the steps of providing said nucleic acid in a cell or in an expression system, and expressing said polypeptide from said nucleic acid.

21 59. A method of using the nucleic acid of claim 51 to express a polypeptide encoded by said nucleic acid, said method comprising the steps of providing said nucleic acid in a cell or in an expression system, and expressing said polypeptide from said nucleic acid.

comprising the steps of:

- (i) isolating RNA from a cell sample;
- (ii) hybridizing the RNA with an isolated full-length, wild-type RB cDNA probe; and
- (iii) detecting the presence of an abnormal RB RNA, the presence of a normal RB RNA or absence of an RB RNA, wherein the presence of an abnormal RB RNA or the absence of an RB RNA indicates a mutated RB gene.

3 24. (Amended) An isolated nucleic acid molecule comprising a nucleotide sequence encoding a full length human wild type retinoblastoma protein, as shown in exons 1-27, inclusive, in FIG. 6.

B1 4 25. (Amended) The isolated nucleic acid molecule of claim 24, wherein the nucleotide sequence is as shown in exons 1-27, inclusive, in FIG. 6.

Sub 3 26. (Amended) An isolated nucleic acid molecule [comprising a nucleotide sequence] encoding [full-length] retinoblastoma protein.

27. (Amended) The nucleic acid molecule of claim 26, wherein said [full-length] retinoblastoma protein has the amino acid sequence encoded by [of] exons 1-27, inclusive, as shown in FIG. 6.

Sub 4 28. The nucleic acid molecule of claim 26, wherein said nucleic acid has an open-reading frame, and wherein the 5' end of said open-reading frame is shown at nucleotide position four of the nucleotide sequence shown in FIG. 5, and the 3' end of said open-reading frame is shown at nucleotide position 2784 of the nucleotide sequence shown in FIG. 5.

29. The nucleic acid molecule of claim 26, wherein said retinoblastoma protein is normal retinoblastoma protein.